

DETAILED ACTION

During the interview held on 5/22/09, it was decided to have prosecution reopen and to have claims 22 – 42 being considered.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the aerial vehicle disclose in claim 26 and the plurality/three arc segments as described in claims 27, 28 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may

be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 24 recites the limitation "the cylinder" in line 2. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 28 recites the limitation "the plurality of non-contiguous arc segments" in lines 1, 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colgate (US 3,234,395) in view of Heniges (US 4,485,768).

Colgate discloses a ring generator having an opposed piston 14, opposed cylinder engine 11 having magnetic flux element 44 and a current conducting element 34, 36 disposed in fixed relation to the ring assembly (see figure 1) and the current is sent to storage device 38 via a stator assembly (current conducting element) 36, 34 (see figures 1, 6).

However, Colgate does not disclose having a crankshaft of an engine being connected to a drive shaft.

On the other hand, Heniges discloses for the purpose of changing efficiently the piston stroke and compression ratio of an engine, an opposed piston, opposed cylinder engine having a crankshaft (see figures 3, 7) and such crankshaft is coupled to a driveshaft 13 (see figure 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a generating system as disclosed by Colgate and to have a crankshaft being connected to a driveshaft for the purpose of changing efficiently the piston stroke and compression ratio of an engine as disclosed by Heniges.

7. Claims 10, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colgate (US 3,234,395) in view of Heniges (US 4,485,768) and Patarchi (US 6,486,582).

Colgate discloses a ring generator having an opposed piston 14, opposed cylinder engine 11 having magnetic flux element 44 and a current conducting element 34, 36 disposed in fixed relation to the ring assembly (see figure 1) and the current is sent to storage device 38 via a stator assembly (current conducting element) 36, 34 (see figures 1, 6).

However, Colgate does not disclose having a crankshaft of an engine being connected to a drive shaft.

On the other hand, Heniges discloses for the purpose of changing efficiently the piston stroke and compression ratio of an engine, an opposed piston, opposed

cylinder engine having a crankshaft (see figures 3, 7) and such crankshaft is coupled to a driveshaft 13 (see figure 4).

However, neither Dildine nor Heniges disclose that the flux generating elements is made of a plurality of magnets.

On the other hand, Patarchi discloses for the purpose of providing a dynamo electric machine that is reliable and easy to maintain, a magnetic flux generating element being made of a plurality of magnets 10, 11 (see figure 1), which interact with winding 20 of stator 2 (see figure 4). It is also disclosed that the rotor 6 is made of soft iron (column 4, lines 8, 9), thus it is made of a ferrous material. Moreover, it is disclosed a ring assembly having a plurality of blades 41 disposed from a shaft (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a generating system as disclosed by Colgate and to have a crankshaft being connected to a driveshaft for the purpose of changing efficiently the piston stroke and compression ratio of an engine as disclosed by Heniges and to have a ring assembly having a plurality of blades disposed on a shaft for the purpose of providing a dynamo electric machine that is reliable and easy to maintain as disclosed by Patarchi.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Colgate, Heniges and Patarchi as applied to claim 14 above, and further in view of Kilgore et al (US 3,809,914)

The combined generating apparatus discloses all of the elements above. However, the combined generating apparatus does not disclose using three phase winding in the stator.

On the other hand, Kilgore et al discloses for the purpose of reducing the cost of implementing power plants that it is well known in the art to have generator 11 having three-phase winding 14 in the stator (see figure 1; column 2, lines 20, 21)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined generating apparatus as disclosed above and to modify the invention by using three phase winding in the stator for the purpose of reducing the cost of implementing power plants as disclosed by Kilgore et al.

Response to Arguments

9. Applicant's arguments with respect to claims 10, 12, 13, 14, 15 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

10. Claims 22 – 42 are allowed. However, it is reminded that the drawing and 112 corrections (see office action above) must be made in order to process the present application to allowance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is 571-272-2024. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas Patel can be reached on 571-272-2098.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Julio C. Gonzalez/
Primary Examiner, Art Unit 2834

May 29, 2009

/J. C. G./
Primary Examiner, Art Unit 2834